

## Claims

1.

Arrangement for inspecting objects, especially masks in microlithography, that are disposed in a vacuum chamber; where a converter is provided for converting illuminating radiation emitted from the object into a radiation of a higher wavelength. A sensor is also provided for recording images. The sensor is disposed outside the vacuum chamber and is arranged as an optical interface from the vacuum chamber to the sensor of the converter or at least one part of an image lens is arranged as a window in the vacuum chamber.

2.

Arrangement pursuant to claim 1, where the image lens is a cement-free hybrid lens having at least one diffractive optical element DOE.

3.

Arrangement pursuant to claim 2, where a first lens group having a positive refraction power and a second lens group having a negative refraction power and arranged downstream from the first lens group are provided and the first lens group contains the DOE.